

FEBRILE SEIZURES

There are few things in life more terrifying than watching your child have a seizure. All sorts of questions go through your mind. What am I supposed to do? Is he okay? Will she have brain damage? Does he have epilepsy? Fortunately, the most common cause of childhood seizures is not epilepsy or brain damage – it is a fever. At some point in childhood, about one out of every twenty-five healthy children (emphasis on the word “healthy”) will have a seizure due to a fever, also called a febrile seizure. These children usually have no other reason to have a seizure, and most will never have another one.

A seizure is caused by disorganized electrical activity in the brain. Seizures can be due to permanent short-circuits in the brain (epilepsy), something that damages or alters the structure of the brain (a serious injury or a tumor), or by something that temporarily affects the function of normal brain circuits (low blood sugar, a concussion, an infection like meningitis, or simply having a fever). The term “epilepsy” implies a permanent or long-term seizure problem, but some children with epilepsy literally out-grow the problem as the brain circuits mature.

There are many different kinds of seizures, but a “typical febrile seizure” usually leads to stiffening and rhythmic jerking all over the body (known medically as a “generalized tonic-clonic seizure”). It is usually fairly brief – less than a minute, which is an eternity when you are watching your child – but it can occasionally last as long as 15 minutes. It usually occurs in children between the ages of 6 months and 5 years. During febrile seizures, children are not responsive, and they do not remember having the seizure. Afterward, they fall asleep for a while.

With a febrile seizure, the temperature is usually over 102 degrees, but the rapid rise is more of a trigger than the height of the fever. It usually happens on the first day of the fever, and I have seen several children whose parents did not even realize that they had a fever until after the seizure. The take-home message here is that it is hard to prevent.

From the parent’s point of view, the most important thing to remember is that a febrile seizure is rarely harmful. Of course, when your child is having a seizure in front of you, you have no idea why it is happening – that will be determined later. All you know then is that your child is having a seizure and that you are terrified.

So what do you do? Rational thought will be difficult at that moment, but the most important thing is to make sure your child does not get hurt. Put him on the floor so he cannot fall and roll him onto his side or stomach so it will be easier to keep his mouth and throat clear. Do not attempt to hold her, and never stick anything in her mouth. If it really is a febrile seizure, it may have already stopped by the time you have done these things. But since you may not know at that point what caused the seizure, go ahead and call 911.

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From a doctor's point of view, when a child has a "typical febrile seizure" the most immediate concern is finding the cause of the fever. Stopping the seizure is usually not an issue, since these are brief seizures that have usually stopped by then. Unless there was something "atypical" about the seizure or something unusual about how the child is acting, it is not likely to be a first sign of epilepsy, and no further "seizure evaluation" is necessary.

Having said this, about a third of the children who have a febrile seizure will have at least one more febrile before the age of 5. Even then, only 1% of kids who have typical febrile seizures actually have epilepsy.

Looking for the cause of the fever might be as simple as doing an exam and finding an ear infection. If nothing shows up on the exam, other tests may need to be necessary to look for a more serious infection like bacteremia (bacteria in the bloodstream) or a urinary tract infection. However, the most common causes of febrile seizures are run-of-the-mill viral infections, not serious infections.

So far, I have discussed "typical febrile seizures", but the less common "atypical febrile seizures" are a bigger deal. An atypical febrile seizure would be a seizure outside the "typical" age range (under 6 months or over 5 years), one affecting one part or one side of the body, or one lasting longer than 15 minutes. In this case, it may be necessary to do a CT scan of the brain or even a spinal tap to make sure nothing more serious is going on. If a child has an atypical febrile seizure, if there is a family history of epilepsy, if the child has had several febrile seizures before, or if the child already has a developmental problem, then the likelihood of really having epilepsy is much higher, and I usually recommend a more in-depth evaluation with a neurologist, even if all of the initial tests look fine.

It is rarely necessary to use seizure medications to either treat or prevent febrile seizures. If a child has had a febrile seizure, I usually explain to the parents how to become a little more aggressive with fever control in the future with acetaminophen or ibuprofen (although since the rapid rise of the fever is more of a trigger than the height of the fever, this is of questionable benefit). However, for most children who have never had febrile seizures, I still firmly believe that you treat a child's fever to make him or her feel better, not to prevent a seizure.

This is a frightening and complicated topic, but it is also a common problem that doctors sometimes explain poorly. The explanation is often delivered when parents are in a state of shock, so the important parts do not sink in. I hope you will never need to know this information, but if you do, I hope this is helpful.